

The Big Picture

Property of Capt. William Band
Association of Maryland Pilots

Introduction

- Collision avoidance through education and communication
- All countries require pilot services in their territorial waters
- Pilots are experts in ship handling, local knowledge, and navigation of their routes

Topics of Discussion

- Watch standing routine aboard ships
- Ship profiles
- Rules of the Road
- Maneuvering and maneuvering limitations of ships
- Communication



Association of Maryland Pilots



Association of Maryland Pilots



Association of Maryland Pilots

Modern Wheelhouse



Association of Maryland Pilots



Association of Maryland Pilots

Typical Chesapeake Bay Pilot Routes

- Cape Henry to Baltimore
- Baltimore to the C&D Canal



Types of Ships

- Ship profiles
- Tugs and barges
- Dredges

Container Ship



Association of Maryland Pilots

Tanker



Association of Maryland Pilots

Roll on Roll Off (RORO)



Association of Maryland Pilots

Car Carrier (RORO)



Passenger Ship



Association of Maryland Pilots

Bulk Carrier



Association of Maryland Pilots

Breakbulk Ship



Association of Maryland Pilots

Tall Ships



Association of Maryland Pilots

LNG Ships



Association of Maryland Pilots

Naval Vessels



Association of Maryland Pilots

Naval Vessel Protection Zone

- All vessels within 500 yards of a U.S. Naval vessel shall operate at minimum steerageway
- No vessels are allowed within 100 yards of a U.S. Naval vessel unless given permission on VHF-FM channel 16

Tugs and Tows

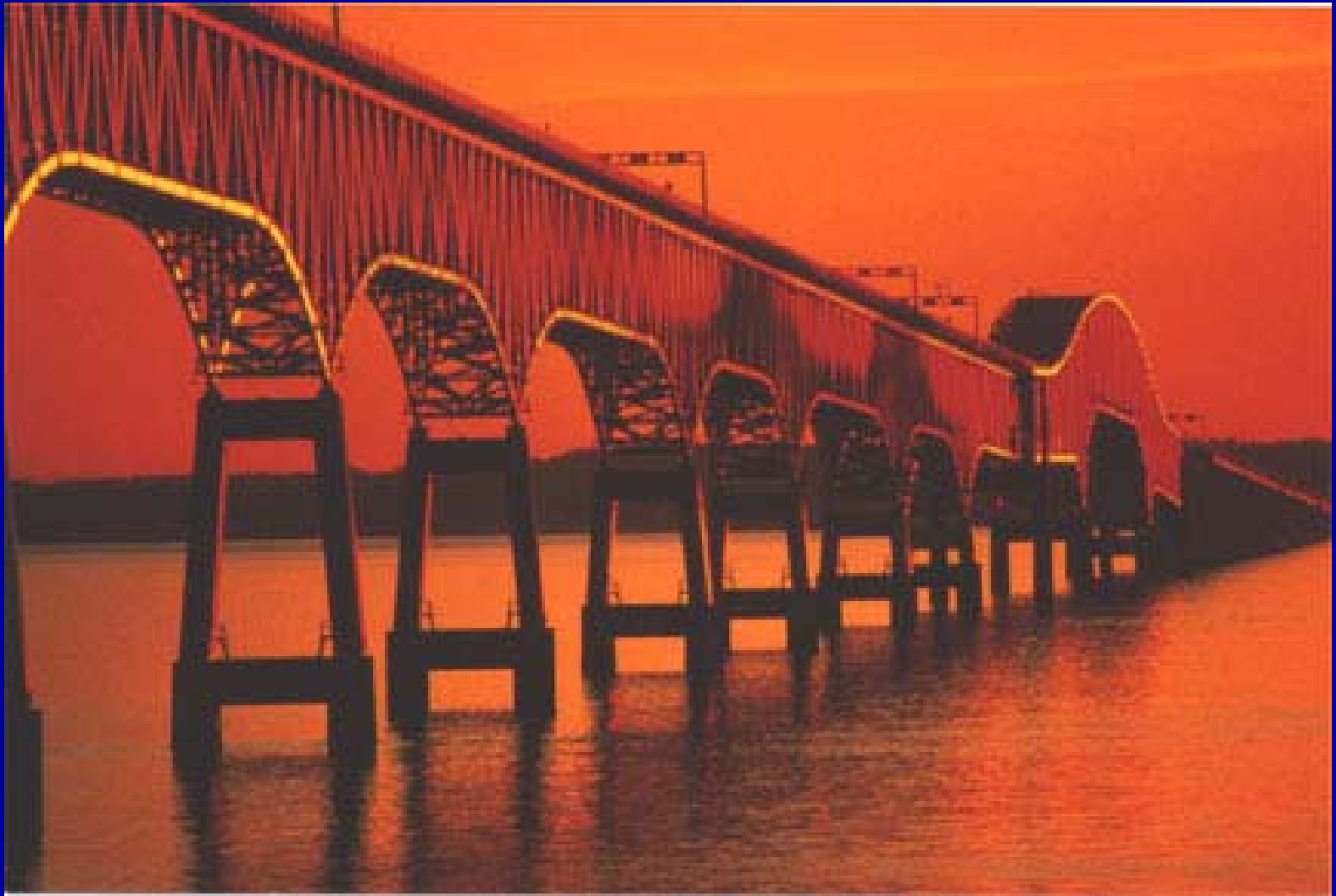


Association of Maryland Pilots

Dredges



Association of Maryland Pilots



Association of Maryland Pilots

Pilot Operations

- Boarding Ships
- Maneuvering to make a lee
- Pilot tower

Boarding Ships



Association of Maryland Pilots



Association of Maryland Pilots

Pilot boats



Association of Maryland Pilots



Association of Maryland Pilots

Cape Henry Pilot Tower

- Monitors VHF Channels 16 and 11
- Both Maryland and Virginia Pilots

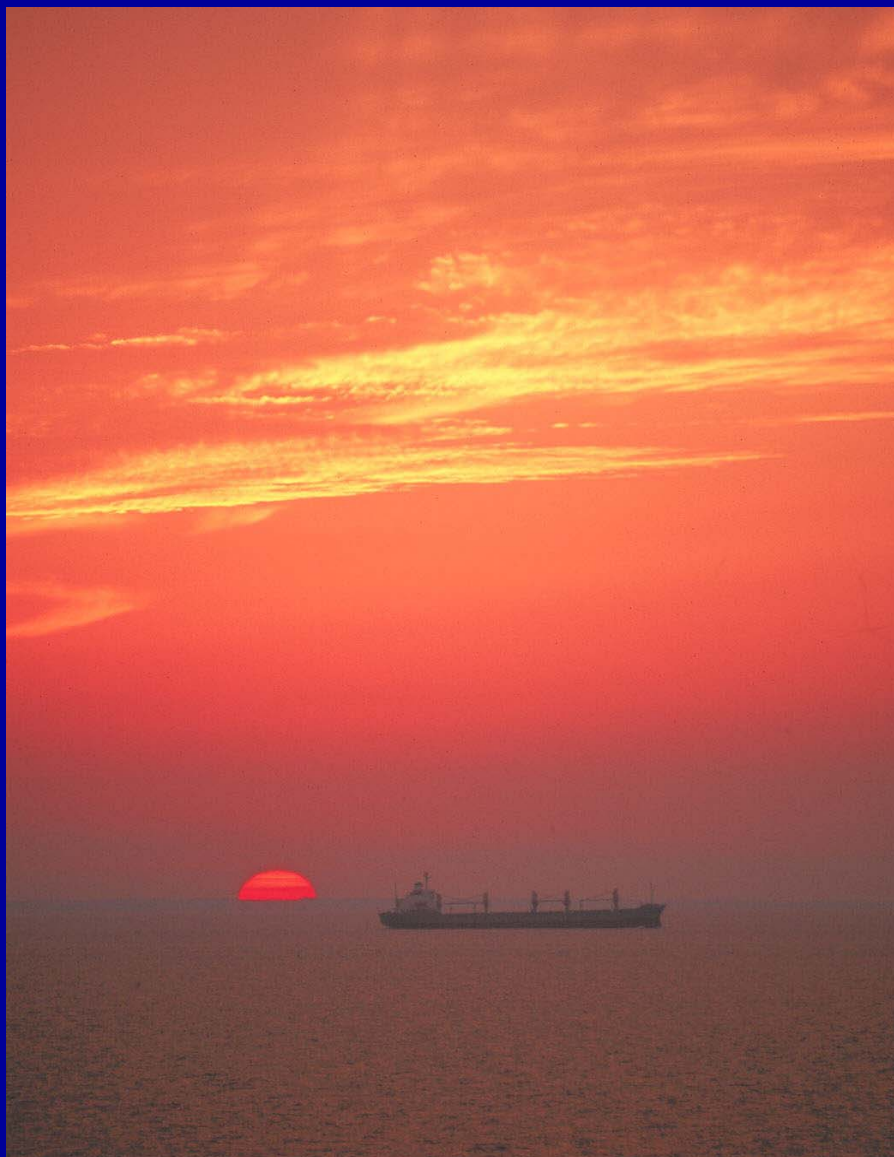




Association of Maryland Pilots

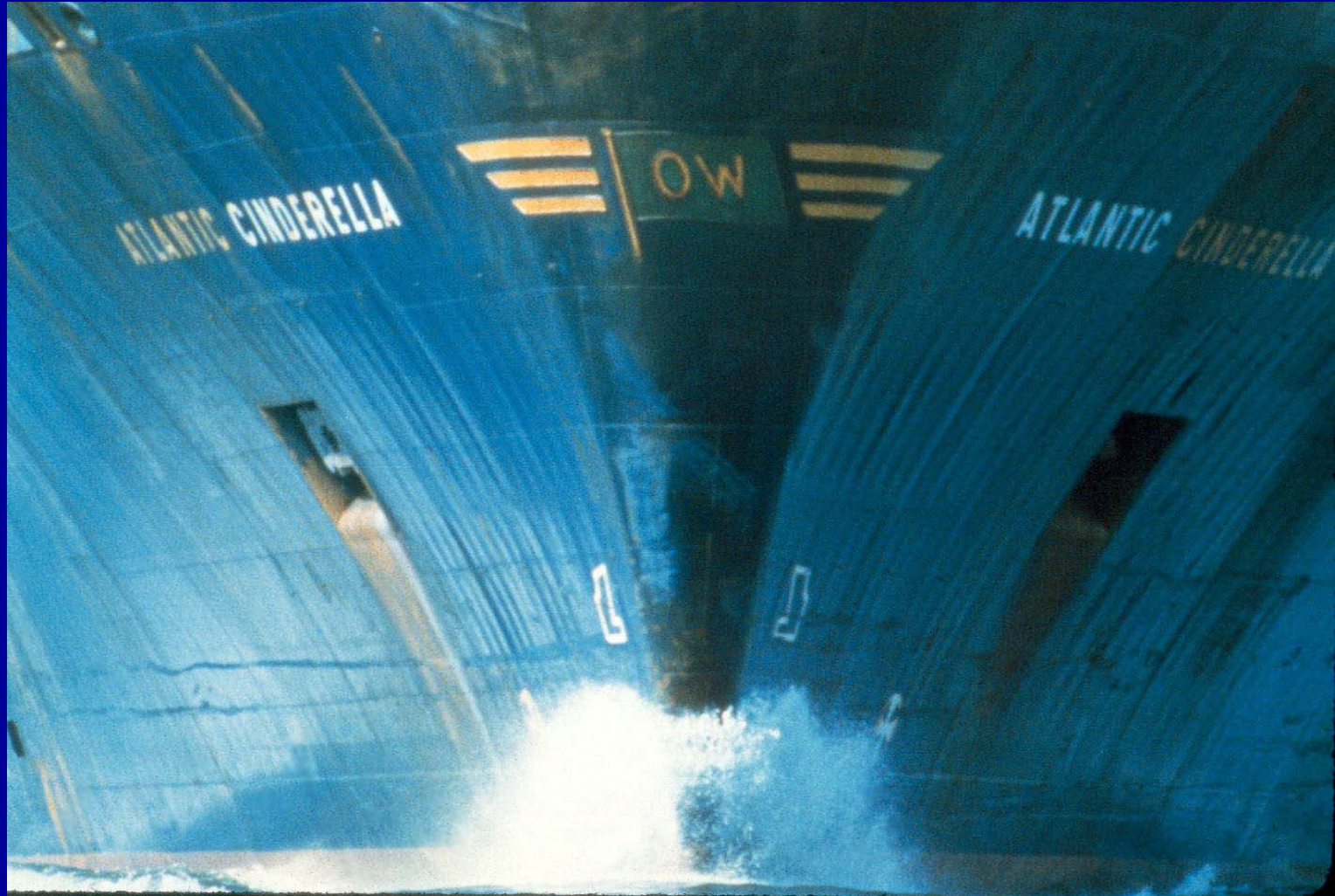
Cape Henry Traffic Scheme





Association of Maryland Pilots

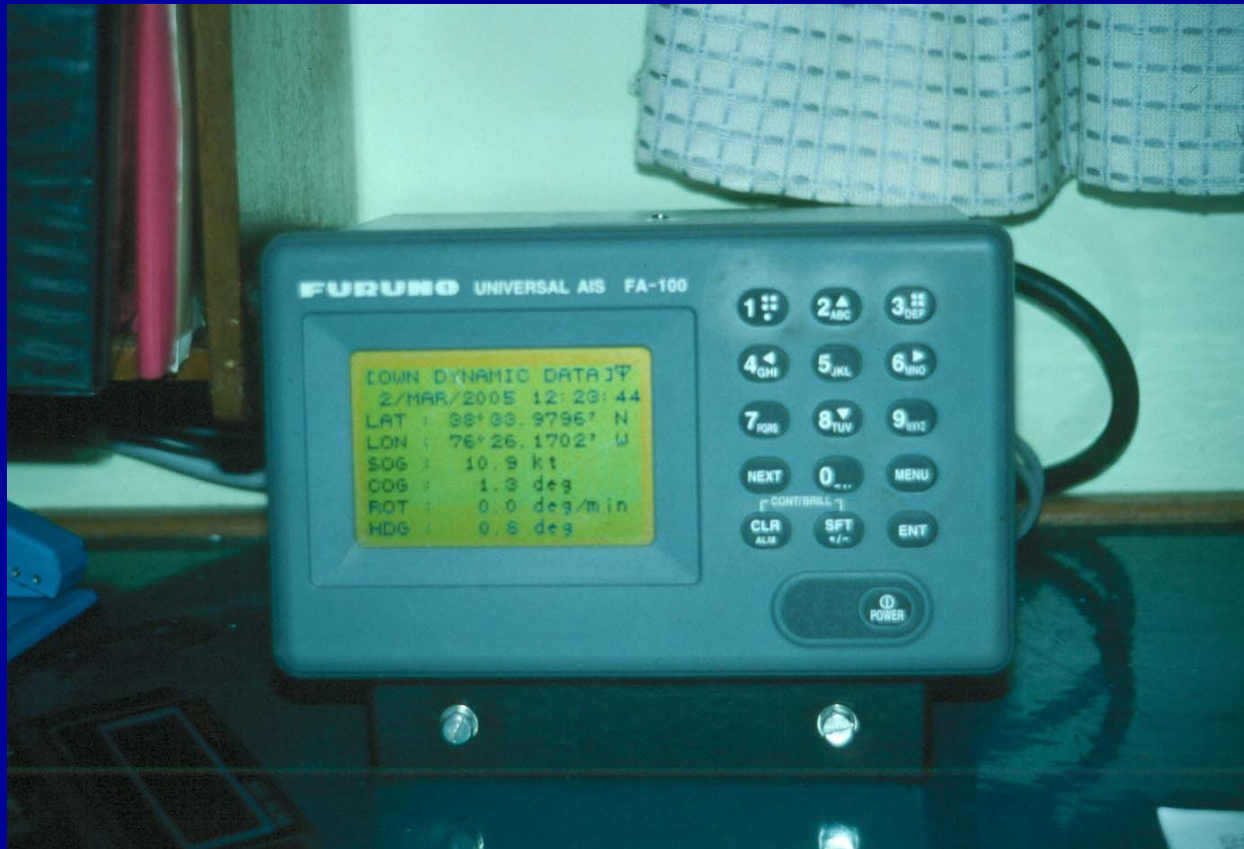
Collision Avoidance



Association of Maryland Pilots

Automated Information System

AIS



Association of Maryland Pilots

Collision Avoidance

- Always stand a good watch
- Know the Rules of the Road
- Take early and substantial action when maneuvering
- Use radar reflectors
- Know the proper use of radios
- Know the meaning of whistle signals
- Keep bright, proper running lights

Collision Avoidance

- In poor visibility, if uncertain what to do stop and let the ship maneuver around you
- Chances are good that large ships will not hear whistle signals from small vessels
- Be aware of the fast relative speed of ships and that they are generally quiet

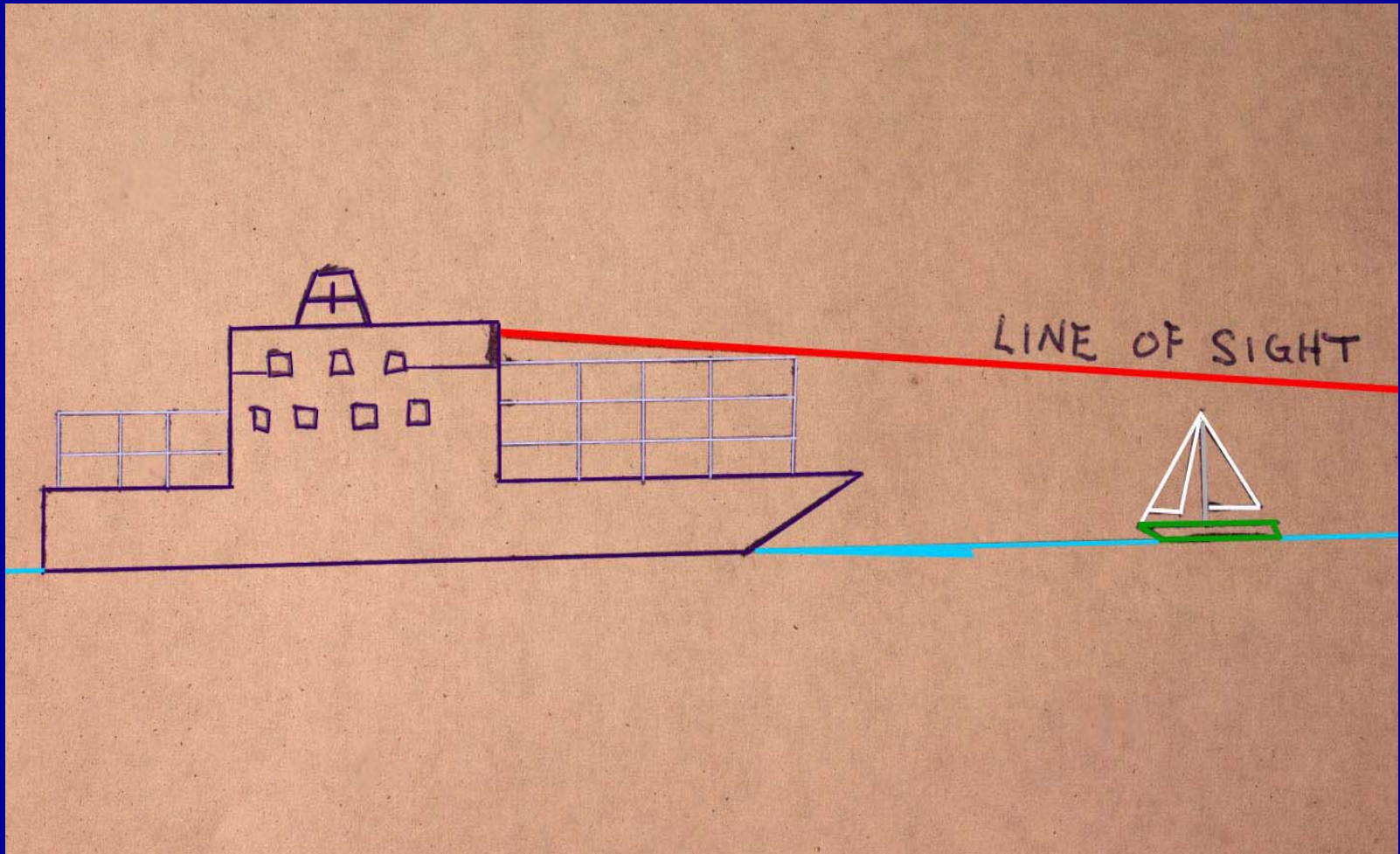
Collision Avoidance

- When possible, stay to the sides or out of shipping channels
- Stay clear of the center span of bridges
- Anticipate ship maneuvers in pilot transfer areas, shipping channels, and anchorages

Collision Avoidance

- Height of eye and the whole picture
- Inadvertently maneuvering into the ship's lee

Obstructed View





Association of Maryland Pilots



Association of Maryland Pilots



Association of Maryland Pilots



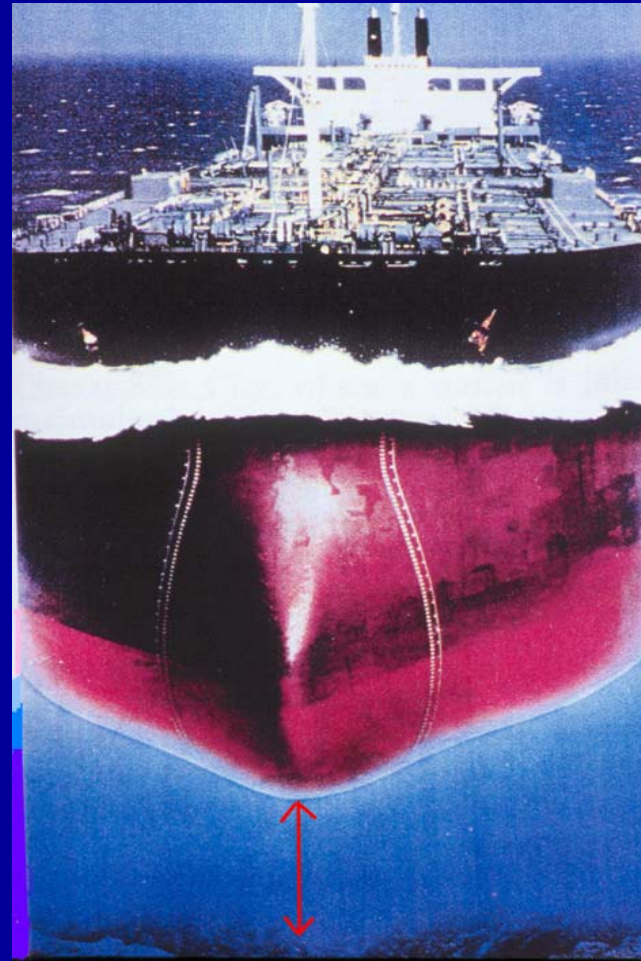
Association of Maryland Pilots



Association of Maryland Pilots

Large Bulk Carrier

- Channel project depth of 50 feet in the Chesapeake Bay
- Pilots move 47 feet 6 inches in draft
- Ships can weigh 200,000 tons +





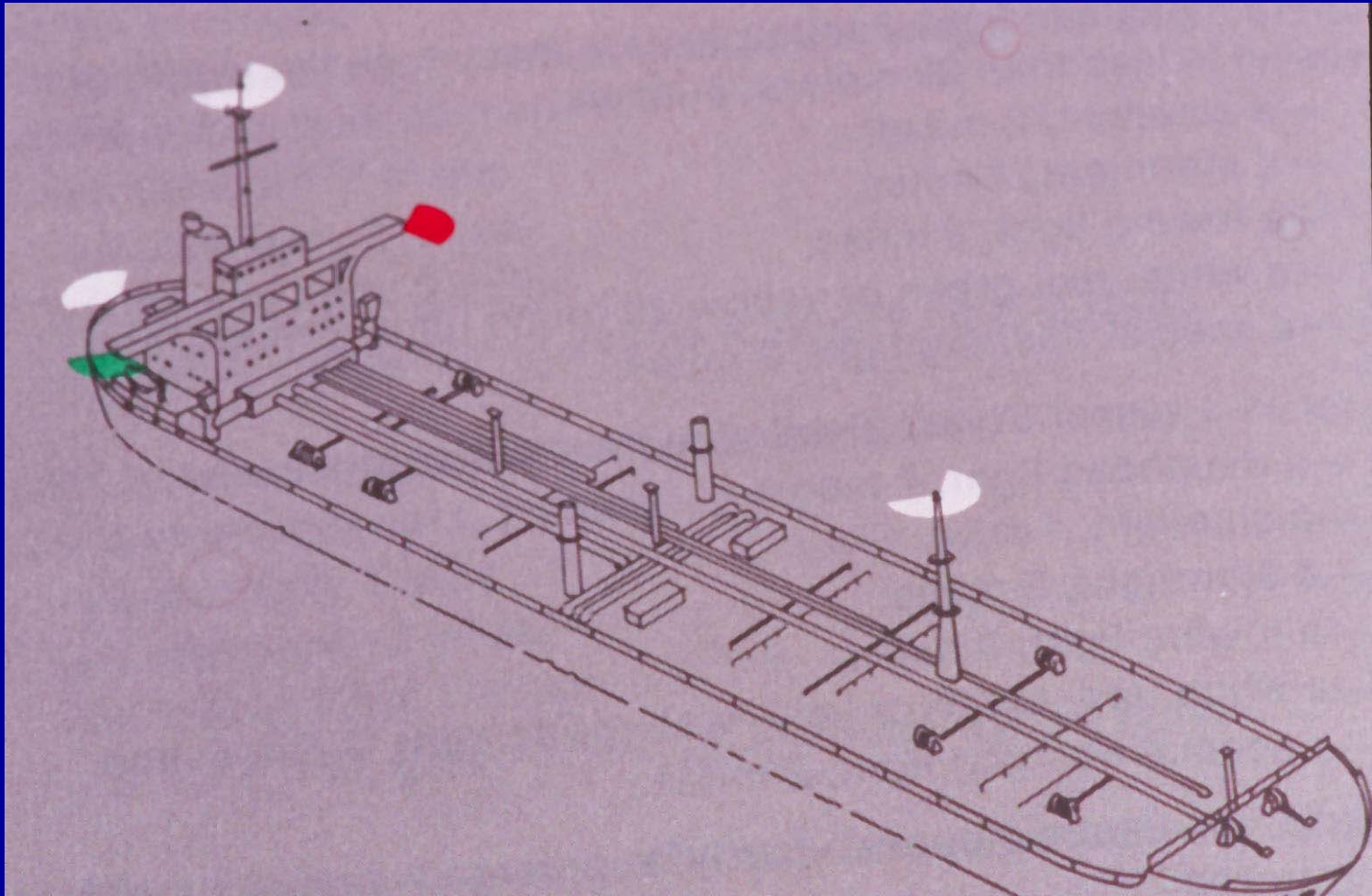
Association of Maryland Pilots

Dangerous Wake



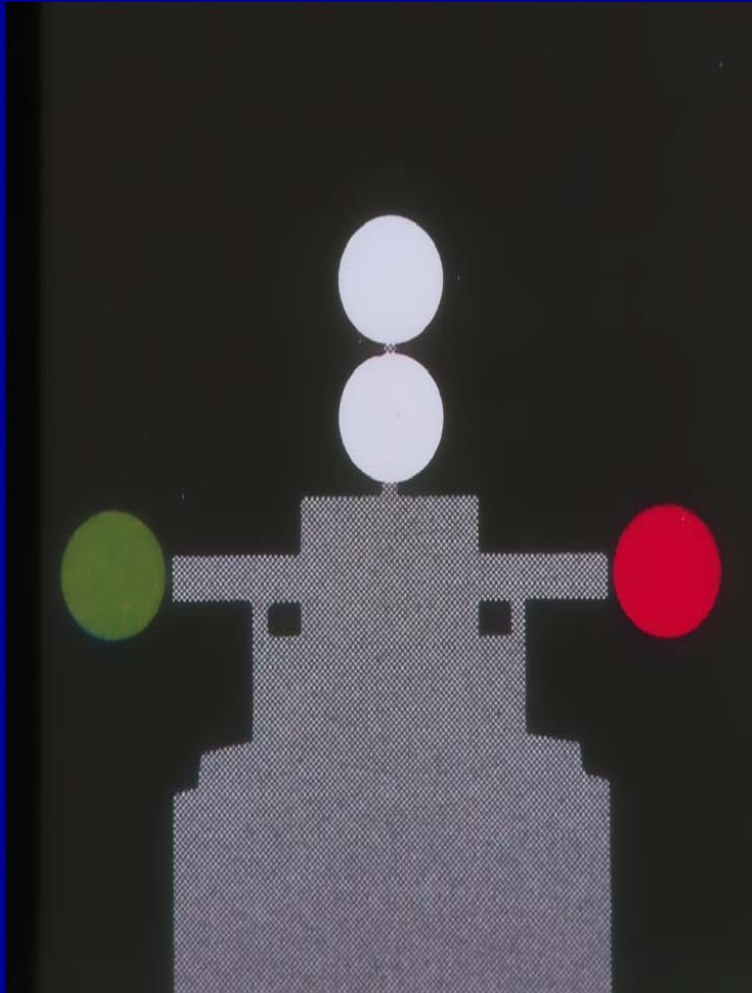
Association of Maryland Pilots

Navigation Lights

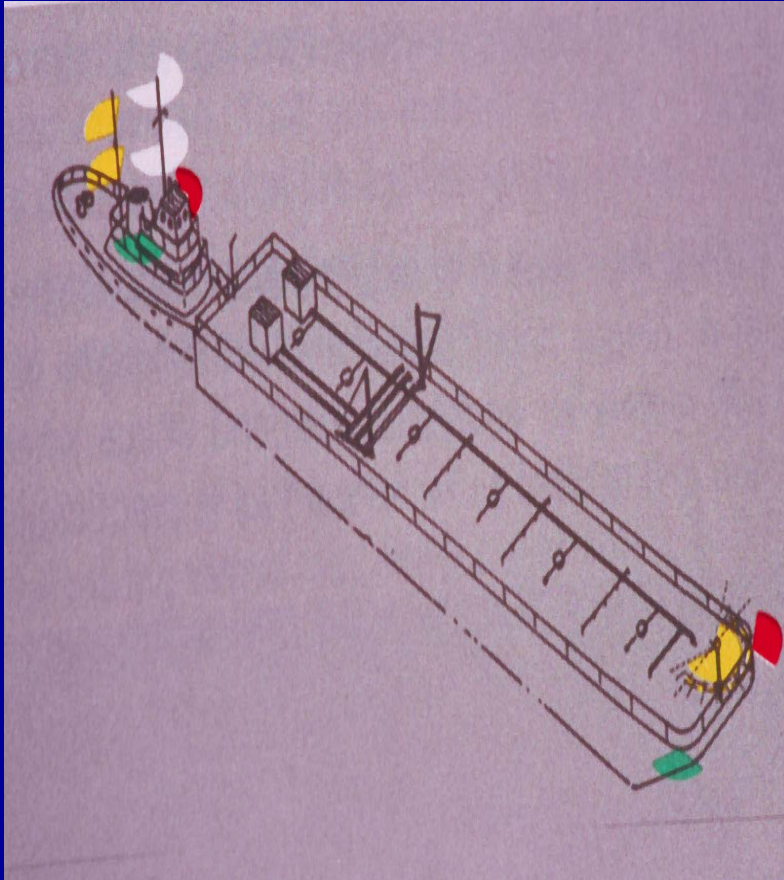


Association of Maryland Pilots

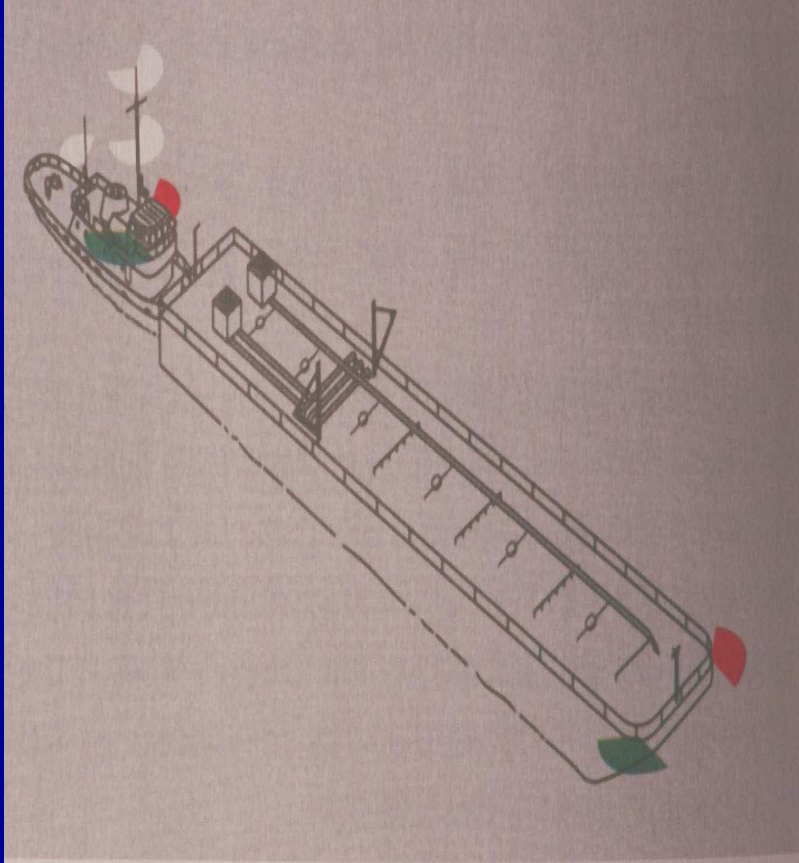
Ship End On



Tug Pushing Inland

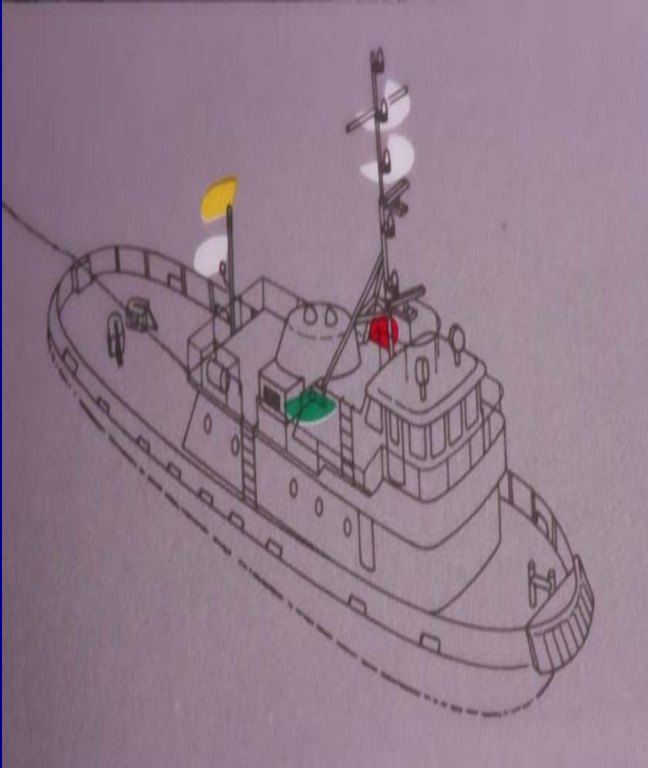


Tug Pushing International

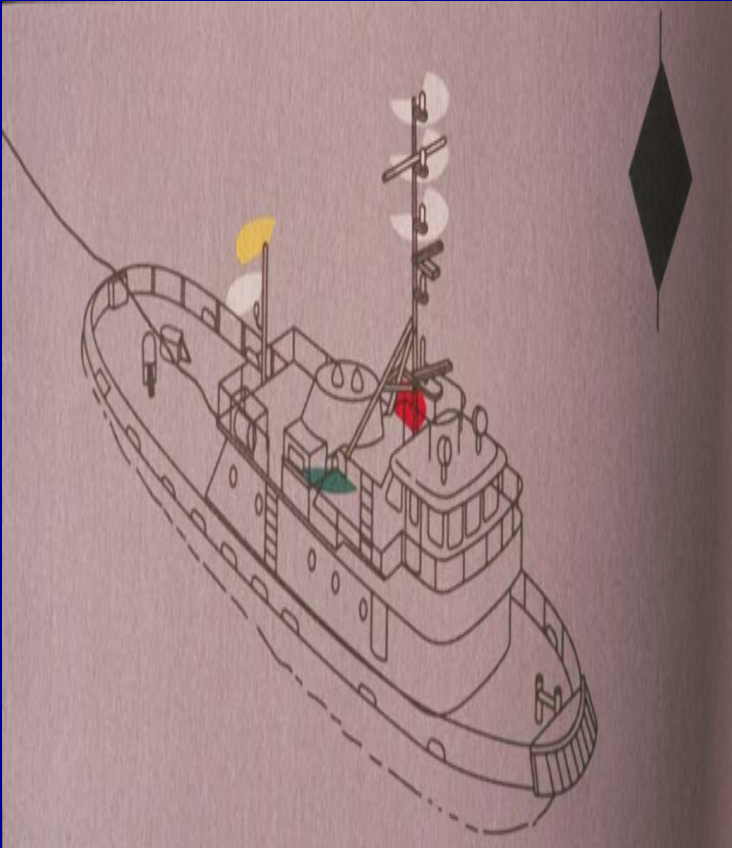


Association of Maryland Pilots

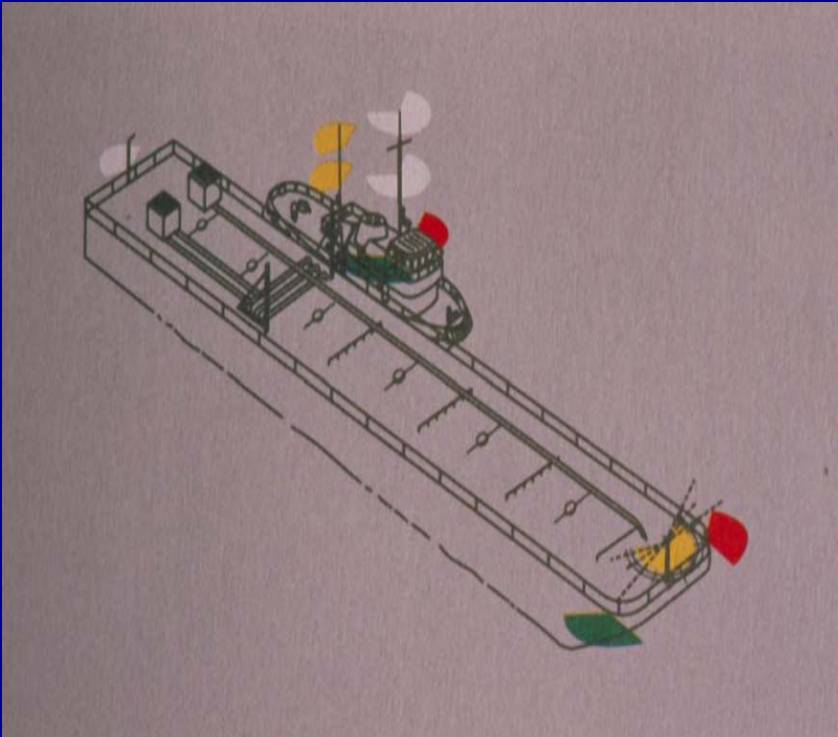
Tug Towing Less Than 200 meters

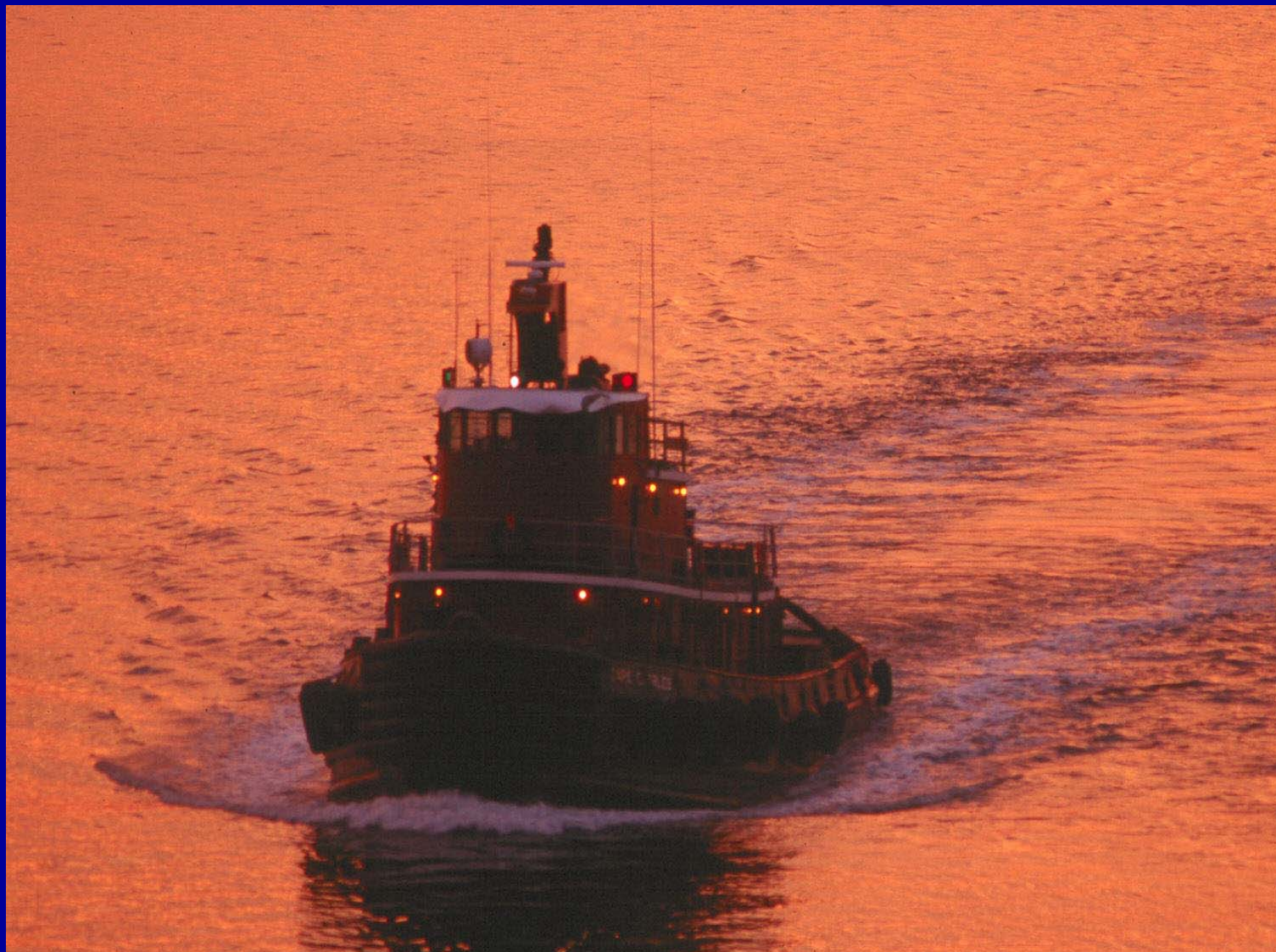


Tug Towing, Tow in Excess of 200 meters



Tug Alongside

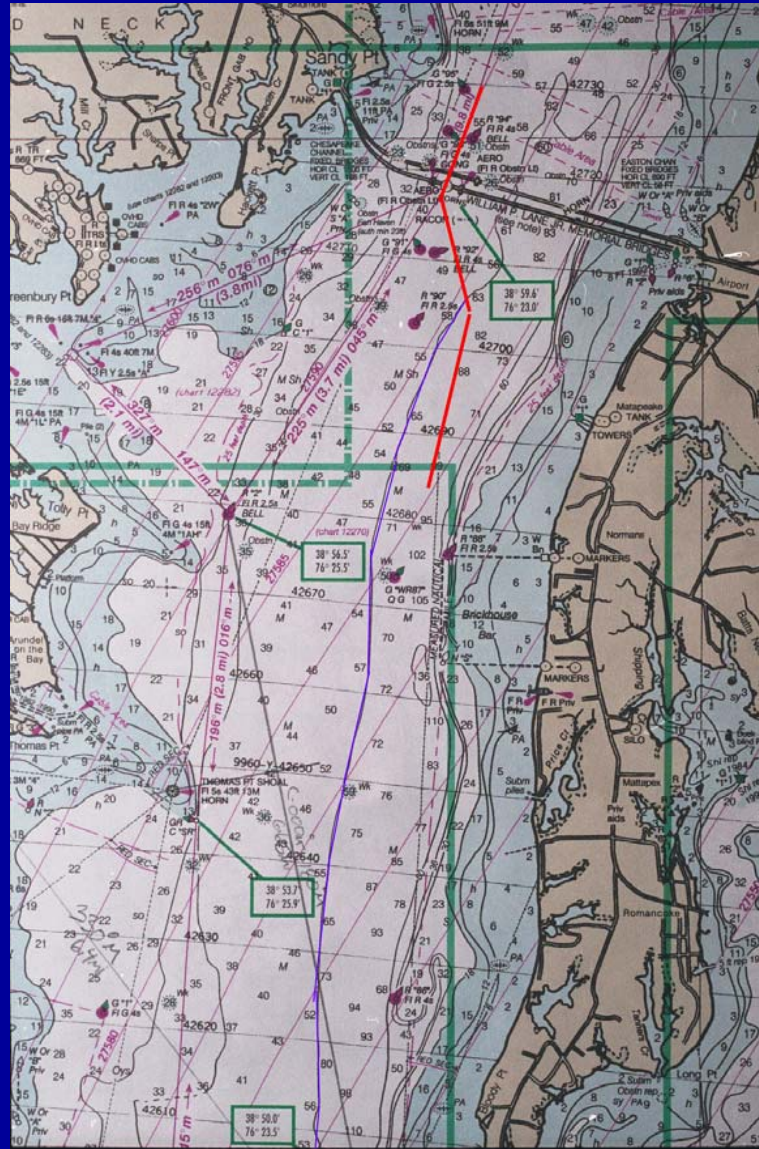




Association of Maryland Pilots

Bay Bridge to Bloody Point

Preferred Ship Route



Association of Maryland Pilots

BALTIMORE HARBOR

SCALE 1:20,000

Table of Soundings

Place	10	100	1000	10000	100000
Soundings	10	100	1000	10000	100000
Soundings	10	100	1000	10000	100000
Soundings	10	100	1000	10000	100000

Channel Depths

NAME OF CHANNEL	Depth in fathoms	Depth in meters
BALTIMORE CHANNEL (10' 100' 1000' 10000' 100000')	10	100
CHESAPEAKE CHANNEL (10' 100' 1000' 10000' 100000')	10	100
CLARK'S BAY CHANNEL (10' 100' 1000' 10000' 100000')	10	100
EVERETT CHANNEL (10' 100' 1000' 10000' 100000')	10	100
EAST CHANNEL (10' 100' 1000' 10000' 100000')	10	100
EAST CHANNEL (10' 100' 1000' 10000' 100000')	10	100
WEST CHANNEL (10' 100' 1000' 10000' 100000')	10	100

CONTINUATION TO MIDDLE BRANCH

on the same scale

Association of Maryland Pilots

Fog



Association of Maryland Pilots



Association of Maryland Pilots



Association of Maryland Pilots

Thunderstorms



Association of Maryland Pilots

Snow & Ice



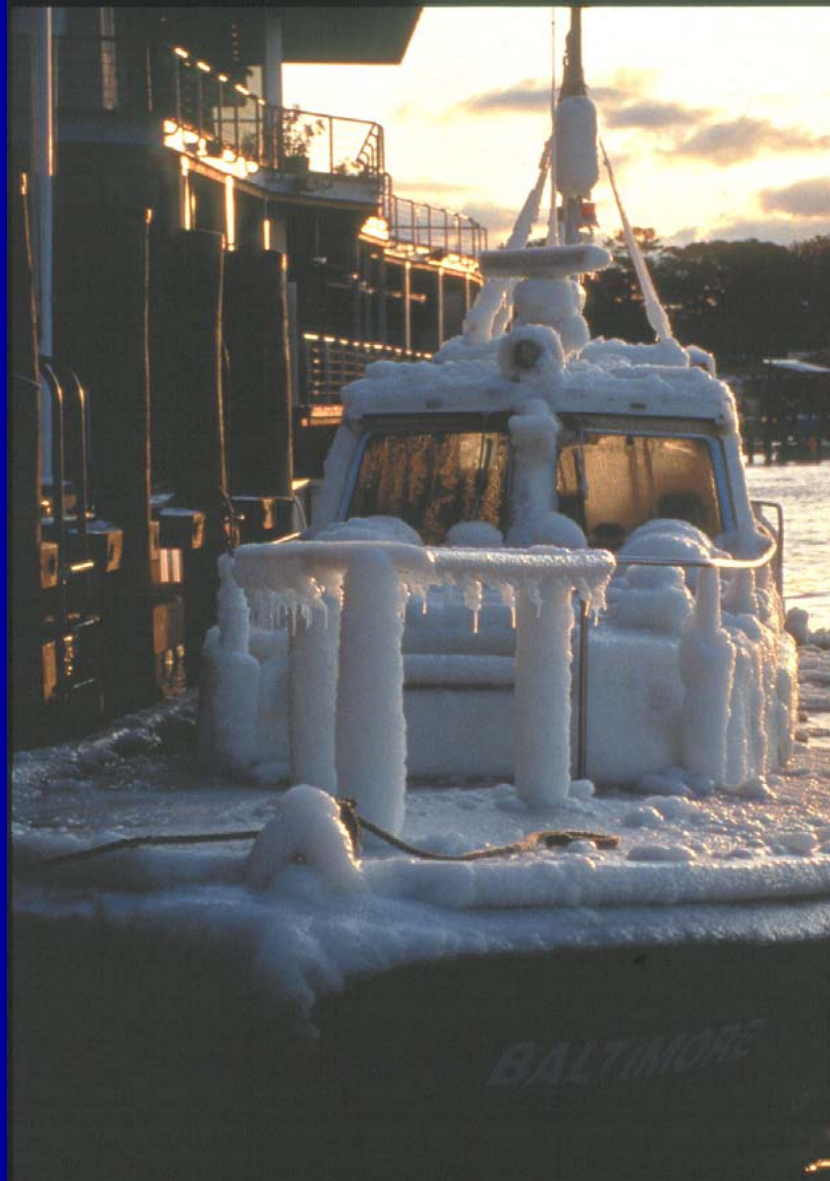
Association of Maryland Pilots



Association of Maryland Pilots



Association of Maryland Pilots



Association of Maryland Pilots

6.1100
14.1112
NORTH UP
PULSED ON
NO
ECHO
ECL

1997
10.200
5151

AUTOTUNE XXXXXX
ANT 1 MAIN

GYRO 17.3°
NAV 19.0KT GND

GRP4 DNR
TRU VEC CHIN GND

RNG 0.3000
Chang 220.5° T
COP 340.5° T GND
SPO 12.4KT GND

CPA 0.000 TSM 24.000
ECR 12.000 DET 1.000

MPT56 51.100
140.9° T

DNR SHIP (GPS)
22° 40.000N
76° 10.000W
+CURSOR FCN
22° 34.000N
76° 00.000W

GUARD
TRU TRAIL
SHIN VRN

OFF CENTER

Association of Maryland Pilots

C & D Canal and Approaches

- Channel project depth of 36 feet
- Maximum draft for pilots 33'6"
- Maximum width 400 feet
- Distance from Baltimore to pilot change at Chesapeake City is 40 miles



Association of Maryland Pilots



Association of Maryland Pilots

Docking Ships



Association of Maryland Pilots



Association of Maryland Pilots

Heavy Weather



Association of Maryland Pilots



Association of Maryland Pilots



Association of Maryland Pilots



Association of Maryland Pilots

H Flag



Association of Maryland Pilots